AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A method ~~for deferring instantiation of one or more~~
~~hidden interface elements in a rich Internet application (RIA)~~ comprising:

responsive to beginning ~~said RIA~~ a rich internet application (RIA) and deferring
instantiation of one or more interface elements in said RIA, generating a descriptor tree
having a plurality of descriptor nodes, wherein each of said plurality of descriptor nodes
describes a plurality of ~~visible~~ interface elements of said RIA ~~visible~~ instantiated and visible
at said beginning of said RIA;

creating one or more hidden descriptor nodes in said descriptor tree describing said
one or more ~~hidden~~ interface elements not instantiated or visible at said beginning, wherein
said hidden descriptor nodes are created responsive to a user navigating to said one or more
~~hidden~~ interface elements and wherein, further responsive to said user navigating,
instantiating said interface elements not instantiated at said beginning of said RIA; and

rendering said plurality of ~~visible~~ interface elements instantiated at said beginning of
said RIA and said one or more ~~hidden~~ interface elements not instantiated at said beginning of
said RIA using corresponding ones of:

said plurality of descriptor nodes; and

said one or more hidden descriptor nodes.

2.   (Currently Amended) The method of claim 1 further comprising:

converting said plurality of descriptor nodes into a plurality of detail objects;

converting said one or more hidden descriptor nodes into one or more ~~hidden~~ detail
objects not instantiated at said beginning of said RIA, wherein said plurality of ~~visible~~
interface elements instantiated at said beginning of said RIA and said one or more ~~hidden~~
interface elements not instantiated at said beginning of said RIA are rendered directly using
said plurality of detail objects and said one or more ~~hidden~~ detail objects not instantiated at
said beginning of said RIA.

3.   (Original) The method of claim 1 wherein each one of said plurality of
descriptor nodes and said one or more hidden descriptor nodes contains a software method
for generating each its child nodes.

4.   (Original) The method of claim 1 further comprising:

downloading executable code representing said RIA to a computer of said user responsive to said beginning of said RIA, wherein said generating and said creating use said executable code.

5.   (Currently Amended) The method of claim 2 further comprising:

storing as a plurality of stored nodes each of:

    said plurality of descriptor nodes;

    said one or more hidden descriptor nodes;

    said plurality of detail objects; and

    said one or more ~~hidden~~ detail objects not instantiated at said beginning of said RIA; and

re-rendering each of said plurality of ~~visible~~ interface elements instantiated at said beginning of said RIA and said one or more ~~hidden~~ interface elements, not instantiated at said beginning of said RIA, from said plurality of stored nodes.

6.   (Currently Amended) The method of claim 1 wherein said one or more hidden descriptor nodes created has a navigational relationship with a particular one of said one or more hidden interface elements, not instantiated at said beginning of said RIA, to which said user navigates.

7.   (Original) The method of claim 6 wherein said navigational relationship comprises one or more of:

    a direct link;

    an ordinal relationship;

    a statistical relationship; and

    a positional relationship.

8.   (Original) The method of claim 1 further comprising:

creating select ones of said one or more hidden descriptor nodes in said descriptor tree responsive to beginning said RIA.

9.   (Currently Amended) A method ~~for executing a rich Internet application (RIA) defined using procedural code and declarative code, said method~~ comprising:

creating a root application node of a descriptor tree, responsive to a user initiating ~~said RIA~~ a rich internet application (RIA) defined using procedural code and declarative code;

generating a plurality of descriptor nodes for said descriptor tree, wherein each of said plurality describes an interface element currently <u>instantiated and</u> visible to said user on a currently visible pane of said RIA;

responsive to said user navigating to a subsequent pane of said RIA, constructing a plurality of stacked descriptor nodes for said descriptor tree, wherein each of said plurality of stacked descriptor nodes describes said interface element <u>not instantiated and</u> invisible to said user on said currently visible pane of said RIA and associated with said subsequent pane; and

creating a detail object from each one of:

said plurality of descriptor nodes; and

said plurality of stacked descriptor nodes; and

rendering said interface element using a corresponding detail object.

10.   (Currently Amended) The method of claim 9 wherein said generating comprises:

generating one of said plurality of descriptor nodes for a container of said interface element <u>not instantiated and</u> invisible to said user on said currently visible pane of said RIA.

11.   (Original) The method of claim 9 wherein said association between said subsequent pane and said plurality of stacked descriptor nodes comprises one of:

a direct link;

an ordinal relationship;

a statistical relationship; and

a positional relationship.

12. (Currently Amended) A computer program product having a computer readable medium with computer program logic recorded thereon ~~for deferring instantiation of unseen ones of a plurality of stacked elements in a rich Internet application (RIA)~~, said computer program product comprising:

responsive to starting ~~said RIA~~ a rich internet application (RIA) and deferring instantiation of unseen ones of a plurality of stacked elements in said RIA, code for generating a descriptor tree having a plurality of descriptor nodes, wherein each of said plurality of descriptor nodes describes a plurality of <u>instantiated and</u> visible interface elements of said RIA;

code for creating one or more stacked descriptor nodes in said descriptor tree describing said unseen ones of said plurality of stacked interface elements responsive to a user navigating to said unseen ones, <u>wherein said unseen ones are not instantiated at said starting</u>; and

code for rendering said plurality of visible interface elements and said unseen ones using corresponding ones of:

said plurality of descriptor nodes; and

said one or more stacked descriptor nodes.

13. (Currently Amended) The computer program product of claim 12 further comprising:

code for converting said plurality of descriptor nodes into a plurality of detail objects;

code for converting said one or more stacked descriptor nodes into one or more stacked detail objects, wherein said plurality of <u>instantiated and</u> visible interface elements and said unseen ones are rendered directly using said plurality of detail objects and said one or more stacked detail objects.

14. (Original) The computer program product of claim 12 wherein each one of said plurality of descriptor nodes and said one or more stacked descriptor nodes contains a software method for generating each its child nodes.

15.   (Original) The computer program product of claim 12 further comprising:

code for downloading bytecode representing said RIA to a computer of said user responsive to said starting of said RIA, wherein said code for generating and said code for creating use said bytecode.

16.   (Currently Amended) The computer program product of claim 13 further comprising:

code for storing as a plurality of stored nodes each of:

said plurality of descriptor nodes;

said one or more stacked descriptor nodes;

said plurality of detail objects; and

said one or more stacked detail objects; and

code for re-rendering each of said plurality of <u>instantiated and</u> visible interface elements and said one or more stacked interface elements from said plurality of stored nodes.

17.   (Original) The computer program product of claim 12 wherein said one or more stacked descriptor nodes created has a navigational relationship with a particular one of said one or more stacked interface elements to which said user navigates.

18.   (Original) The computer program product of claim 17 wherein said navigational relationship comprises one or more of:

a direct link;

an ordinal relationship;

a statistical relationship; and

a positional relationship.

19.   (Original) The computer program product of claim 12 further comprising:

code for code for creating select ones of said one or more stacked descriptor nodes in said descriptor tree responsive to starting said RIA.

20.   (Currently Amended) A system ~~for deferring instantiation of a plurality of interface elements in a rich Internet application (RIA)~~ comprising:

responsive to initially accessing ~~said RIA~~ a rich internet application (RIA) and deferring instantiation of a plurality of interface elements in said RIA, means for generating a descriptor tree having a plurality of descriptor nodes, wherein each of said plurality of descriptor nodes describes instantiated and visible ones of said plurality of interface elements of said RIA;

means for creating a plurality of hidden descriptor nodes in said descriptor tree describing ~~hidden~~ ones of said plurality of interface elements not instantiated at said initial accessing, wherein said hidden descriptor nodes are responsive to a user navigating to said one or more of said ~~hidden~~ ones not instantiated at said initial accessing, wherein said responsiveness includes instantiating said interface elements not instantiated at said beginning; and

means for rendering said plurality of interface elements using corresponding ones of:

said plurality of descriptor nodes; and

said plurality of hidden descriptor nodes.

21.   (Currently Amended) The system of claim 20 further comprising:

means for converting said plurality of descriptor nodes into a plurality of detail objects;

means for converting said plurality of hidden descriptor nodes into a plurality of ~~hidden~~ detail objects not instantiated at said initial accessing, wherein said plurality of instantiated and visible interface elements are rendered directly using said plurality of detail objects and said plurality of hidden detail objects.

22.   (Original) The system of claim 20 wherein each one of said plurality of descriptor nodes and said plurality of hidden descriptor nodes contains a software method for generating each its child nodes.

23.   (Original) The system of claim 20 further comprising:

means for downloading executable bytecode representing said RIA to a computer of said user responsive to said initially accessing of said RIA, wherein said means for generating and said means for creating use said executable bytecode.

24.   (Currently Amended) The system of claim 21 further comprising:

means for storing as a plurality of stored nodes each of:

      said plurality of descriptor nodes;

      said plurality of hidden descriptor nodes;

      said plurality of detail objects; and

      said plurality of hidden detail objects not instantiated at said initial accessing;

and

means for re-rendering each of said plurality of interface elements from said plurality of stored nodes responsive to said user navigating to previously viewed ones of said plurality of interface elements.

25.   (Original) The system of claim 20 wherein said plurality of hidden descriptor nodes created has a navigational relationship with a particular one of said hidden ones to which said user navigates.

26.   (Original) The system of claim 25 wherein said navigational relationship comprises one or more of:

      a direct link;

      an ordinal relationship;

      a statistical relationship; and

      a positional relationship.

27.   (Original) The system of claim 20 further comprising:

means for creating select ones of said plurality of hidden descriptor nodes in said descriptor tree responsive to initially accessing said RIA.